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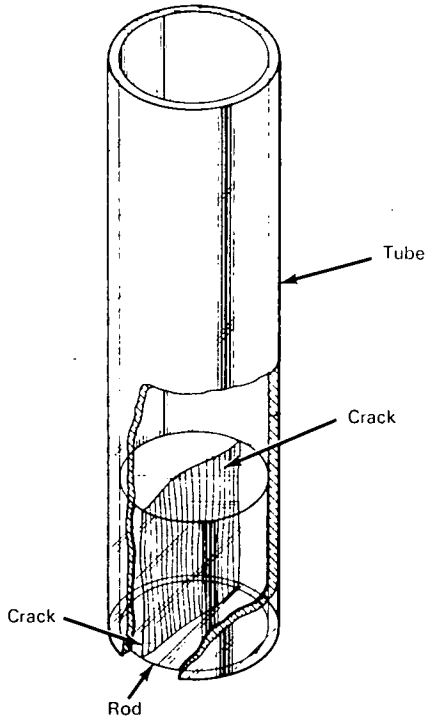
# NASA TECH BRIEF



## Restricted-Flow Junction Between Liquids




Cracked Rod Reassembled within Tube

### The problem:

Development of a means for restricting flow of a liquid for long periods without attention; such a device was required for an automated pH reference electrode.

### The solution:

Liquid can seep for extended periods through a long crack in glass; the length of the crack prevents the plugging to which capillaries are susceptible.

### How it's done:

A short length of glass or pyrex rod is scored longitudinally and cracked along the score by application of pressure. The pieces of the rod are then reassembled and inserted in a glass or pyrex tube whose bore closely matches the diameter of the rod. Heat applied to the tube, in the region of the rod, then fuses the tube to the circumference of the rod; fusion is assured by rolling of the tube between carbon flats.

(continued overleaf)

The flow of liquid through the crack can be further restricted by application of more heat for partial sealing of the crack.

## Notes:

1. Makers of instruments may be interested.
2. No further documentation is available. Inquiries may be directed to:

   Technology Utilization Officer
   NASA Pasadena Office
   4800 Oak Grove Drive
   Pasadena, California 91103
   Reference: B69-10332

## Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free, nonexclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C. 20546.

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